Setting up the server

```
Deleted: sha256:02c055ef67f5904019f43a41ea5f099996d8e7633749b6e606c400526b2c4b33
PS C:\Users\Woysh\Documents\AY 2020-2021\EEE 197\Week 10\ME8_Containerization_and_Docker\5-volumes> docker run --rm -d --name apache -p 80:80 httpd:2.4
Unable to find image 'httpd:2.4' locally
2.4: Pulling from library/httpd
69692152171a: Pull complete
7284b4e0cc7b: Pull complete
3678b2d55ccd: Pull complete
aeb67982a725: Pull complete
06954f8169fd: Pull complete
Digest: sha256:48bae0ac5d0d75168f1c1282c0eb21b43302cb1b5c5dc9fa3b4a758ccfb36fe9
Status: Downloaded newer image for httpd:2.4
ce910a8aeb92b896de4f23108f42b83a1a3e8396fadbc30ef1656607ae64fdbb
```

Curl localhost

```
PS C:\Users\Woysh\Documents\AY 2020-2021\EEE 197\Week 10\ME8_Containerization_and_Docker\5-volumes> curl localhost


StatusCode       : 200
StatusDescription : OK
Content          : <html><body><h1>It works!</h1></body></html>

RawContent       : HTTP/1.1 200 OK
                   Keep-Alive: timeout=5, max=100
                   Connection: Keep-Alive
                   Accept-Ranges: bytes
                   Content-Length: 45
                   Content-Type: text/html
                   Date: Tue, 22 Jun 2021 14:10:32 GMT
                   ETag: "2d-432a5e4a73a80...
Forms            : {}
Headers          : {[Keep-Alive, timeout=5, max=100], [Connection, Keep-Alive], [Accept-Ranges, bytes], [Content-Length, 45]...}
Images           : {}
InputFields      : {}
Links            : {}
ParsedHtml       : mshtml.HTMLDocumentClass
RawContentLength : 45



PS C:\Users\Woysh\Documents\AY 2020-2021\EEE 197\Week 10\ME8_Containerization_and_Docker\5-volumes>
```

```
PS C:\Users\Woysh\Documents\AY 2020-2021\EEE 197\Week 10\ME8_Containerization_and_Docker\5-volumes> docker cp index.html apache:/usr/local/apache2/htdocs/
PS C:\Users\Woysh\Documents\AY 2020-2021\EEE 197\Week 10\ME8_Containerization_and_Docker\5-volumes> curl localhost

StatusCode       : 200
StatusDescription : OK
Content          : <html><body><h1>It works in Docker!</h1></body></html>

RawContent       : HTTP/1.1 200 OK
                   Keep-Alive: timeout=5, max=100
                   Connection: Keep-Alive
                   Accept-Ranges: bytes
                   Content-Length: 56
                   Content-Type: text/html
                   Date: Tue, 22 Jun 2021 14:15:34 GMT
                   ETag: "38-5c556ff802200...
Forms            : {}
Headers          : {[Keep-Alive, timeout=5, max=100], [Connection, Keep-Alive], [Accept-Ranges, bytes], [Content-Length, 56]...}
Images           : {}
InputFields      : {}
Links            : {}
ParsedHtml       : mshtml.HTMLDocumentClass
RawContentLength : 56



PS C:\Users\Woysh\Documents\AY 2020-2021\EEE 197\Week 10\ME8_Containerization_and_Docker\5-volumes>
```

Managing volumes

List of volumes

```
httpd_docs
PS C:\Users\Woysh\Documents\AY 2020-2021\EEE 197\Week 10\ME8_Containerization_and_Docker\5-volumes> docker volume ls
DRIVER     VOLUME NAME
```

Creating a volume

```
PS C:\Users\Woysh\Documents\AY 2020-2021\EEE 197\Week 10\ME8_Containerization_and_Docker\5-volumes> docker volume create myvolume
myvolume
PS C:\Users\Woysh\Documents\AY 2020-2021\EEE 197\Week 10\ME8_Containerization_and_Docker\5-volumes> docker volume ls
DRIVER     VOLUME NAME
local      myvolume
```

Deleting volume

```
PS C:\Users\Woysh\Documents\AY 2020-2021\EEE 197\Week 10\ME8_Containerization_and_Docker\5-volumes> docker volume rm myvolume
myvolume
PS C:\Users\Woysh\Documents\AY 2020-2021\EEE 197\Week 10\ME8_Containerization_and_Docker\5-volumes> docker volume ls
DRIVER     VOLUME NAME
PS C:\Users\Woysh\Documents\AY 2020-2021\EEE 197\Week 10\ME8_Containerization_and_Docker\5-volumes>
```

Mounting Volumes on containers

Create new volume

```
PS C:\Users\Woysh\Documents\AY 2020-2021\EEE 197\Week 10\ME8_Containerization_and_Docker\5-volumes> docker volume create httpd_docs
httpd_docs
PS C:\Users\Woysh\Documents\AY 2020-2021\EEE 197\Week 10\ME8_Containerization_and_Docker\5-volumes> docker volume ls
DRIVER     VOLUME NAME
local      httpd_docs
PS C:\Users\Woysh\Documents\AY 2020-2021\EEE 197\Week 10\ME8_Containerization_and_Docker\5-volumes>
```

Rerunning recopying index.html

```
apache
PS C:\Users\Woysh\Documents\AY 2020-2021\EEE 197\Week 10\ME8_Containerization_and_Docker\5-volumes> docker run --rm -d --name apache -p 80:80 -v httpd_htdocs:/usr/local/apache2/htdocs/ httpd:2.4
9da3336dab90ef7d5c9487003b4112c3c4f4902a994a11d517c4cf77c5f988ac
PS C:\Users\Woysh\Documents\AY 2020-2021\EEE 197\Week 10\ME8_Containerization_and_Docker\5-volumes> docker cp index.html apache:/usr/local/apache2/htdocs/
PS C:\Users\Woysh\Documents\AY 2020-2021\EEE 197\Week 10\ME8_Containerization_and_Docker\5-volumes> curl localhost


StatusCode        : 200
StatusDescription : OK
Content           : <html><body><h1>It works in Docker!</h1></body></html>

RawContent        : HTTP/1.1 200 OK
                    Keep-Alive: timeout=5, max=100
                    Connection: Keep-Alive
                    Accept-Ranges: bytes
                    Content-Length: 56
                    Content-Type: text/html
                    Date: Tue, 22 Jun 2021 16:13:29 GMT
                    ETag: "38-5c556ff802200...
Forms             : {}
Headers           : {[Keep-Alive, timeout=5, max=100], [Connection, Keep-Alive], [Accept-Ranges, bytes], [Content-Length, 56]...}
Images            : {}
InputFields       : {}
Links             : {}
ParsedHtml        : mshtml.HTMLDocumentClass
RawContentLength  : 56
```

Stopping server, removing volume, rerunning

```
PS C:\Users\Woysh\Documents\AY 2020-2021\EEE 197\Week 10\ME8_Containerization_and_Docker\5-volumes> docker stop apache
apache
PS C:\Users\Woysh\Documents\AY 2020-2021\EEE 197\Week 10\ME8_Containerization_and_Docker\5-volumes> docker volume rm httpd_htdocs
httpd_htdocs
PS C:\Users\Woysh\Documents\AY 2020-2021\EEE 197\Week 10\ME8_Containerization_and_Docker\5-volumes> docker run --rm -d --name apache -p 80:80 -v httpd_htdocs:/usr/local/apache2/htdocs/ httpd:2.4
9eef20f3433ffb89b383cccca042b15c583a0f695b4880aed2e951f6f414a784
PS C:\Users\Woysh\Documents\AY 2020-2021\EEE 197\Week 10\ME8_Containerization_and_Docker\5-volumes> curl localhost


StatusCode        : 200
StatusDescription : OK
Content           : <html><body><h1>It works!</h1></body></html>

RawContent        : HTTP/1.1 200 OK
                    Keep-Alive: timeout=5, max=100
                    Connection: Keep-Alive
                    Accept-Ranges: bytes
                    Content-Length: 45
                    Content-Type: text/html
                    Date: Tue, 22 Jun 2021 17:24:16 GMT
                    ETag: "2d-432a5e4a73a80...
Forms             : {}
Headers           : {[Keep-Alive, timeout=5, max=100], [Connection, Keep-Alive], [Accept-Ranges, bytes], [Content-Length, 45]...}
Images            : {}
InputFields       : {}
Links             : {}
ParsedHtml        : mshtml.HTMLDocumentClass
RawContentLength  : 45


PS C:\Users\Woysh\Documents\AY 2020-2021\EEE 197\Week 10\ME8_Containerization_and_Docker\5-volumes>
```

Mounting host directories on containers

```
PS C:\Users\Woysh\Documents\AY_2020_2021\EEE_197\Week_10\ME8_Containerization_and_Docker\5-volumes> docker run --rm -d --name apache -p 80:80 -v /c/users/woysh/documents/ay_2020_2021/eee_197/week_10/ME8_Containerization_and_Docker/5-volumes:/usr/local/apache2/htdocs/ httpd:2.4
8cbffd7ba46816eafb342df7f963de16174ab51aadae8e52cb96d6079d0c4208
PS C:\Users\Woysh\Documents\AY_2020_2021\EEE_197\Week_10\ME8_Containerization_and_Docker\5-volumes> curl localhost

StatusCode        : 200
StatusDescription : OK
Content           : <html><body><h1>It works in Docker!</h1></body></html>

RawContent        : HTTP/1.1 200 OK
                    Accept-Ranges: bytes
                    Content-Length: 56
                    Content-Type: text/html
                    Date: Tue, 22 Jun 2021 18:55:29 GMT
                    ETag: "38-5c556ff83cbaf"
                    Last-Modified: Tue, 22 Jun 2021 08:58:48 GMT
                    Server:...
Forms             : {}
Headers           : {[Accept-Ranges, bytes], [Content-Length, 56], [Content-Type, text/html], [Date, Tue, 22 Jun 2021 18:55:29 GMT]...}
Images            : {}
InputFields       : {}
Links             : {}
ParsedHtml        : mshtml.HTMLDocumentClass
RawContentLength  : 56


PS C:\Users\Woysh\Documents\AY_2020_2021\EEE_197\Week_10\ME8_Containerization_and_Docker\5-volumes>
```